

Worcester Polytechnic Institute
Report of Proposals Submitted
September 2009

Primary Department	Principal Investigator	CoPI(s)	Project Title	Sponsor	Prime Sponsor	Program Type	Amount Requested	Cost Sharing	VUCS	Proposal Code
BioEngineering Inst S/R	McGimpsey, W. Grant	Christopher R. Lambert, Yitzhak Mendelson, Peder C. Pedersen	Real-Time Troop Physiological Status Monitoring Systems Using a Common Wireless Network	US Army		Research	858,000		51,593	10092
	McGimpsey, W. Grant	McRae C. Banks, Terri Anne Camesano, Glenn R Gaudette, George Pins	IGERT: Engineering Technologies for Delivery of Cell and Molecular Therapies	National Science Foundation		Training/Education	3,246,351			10093
	Subtotal: 2						4,104,351		51,593	
Biology S/R	Dilorio, Alexander Anthony		Saccharomyces Fermentations Part I	Dyax Corporation		Other	6,900			10075
	Prusty Rao, Reeta		Genetic and Metabolic Engineering of Yeast to PReduce Fusel Alcohols	Department of Energy		Research	762,294		42,283	10058
	Prusty Rao, Reeta		Understanding Virulence Strategies for Candida albicans Using an In Vivo Whole Animal Infection Assay	National Institute of Health		Research	431,471		28,413	10073
	Vidali, Luis		Genetic Analysis of Plant Cell Growth: Isolation and Characterization of Conditional Loss-of-Growth Mutants in the Moss Physcomitrella patens	Department of Energy		Research	835,156			10057
	Vidali, Luis		Genetic Analysis of Plant Growth: Isolation and Characterization of Conditional Loss-of-Growth Mutants in Physcomitrella patens	National Institute of Health		Research	409,954		29,567	10066
	Subtotal: 5						2,445,775		100,263	
Biomedical S/R	Chon, Ki H.		Distributed Autoregulation of Renal Blood Flow	University of Victoria	Canadian Institutes of Health Research	Research	120,000		20,212	10087
	Gaudette, Glenn R		Mechanical Regeneration of Canine Damaged/Infarcted Heart with Partially Differentiated Human Mesenchymal Stem Cells	SUNY at Stony Brook	New York State Department of Health	Research	236,924	64,167		10083
	Subtotal: 2						356,924	64,167	20,212	
Chem Eng S/R	Camesano, Terri Anne		Environmental Cytotoxicity of Nanoparticles: Differentiating "Nanoparticulate" from "Molecular Scale" Effects	National Science Foundation		Research	307,138		29,567	10071
	Subtotal: 1						307,138		29,567	

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Chemistry S/R	Dittami, James P.		The Synthesis and Biospectra Analysis of New Pharmacophore Scaffolds	National Institute of Health		Research	437,548		30,294	10078
	Subtotal: 1						437,548		30,294	
Computer Science S/R	Beck, Joseph E		ISay: A Social-Computational Environment for Chinese Learners of English	National Science Foundation		Research	748,564		59,134	10065
	Sarkozy, Gabor N		Graph Partitions and their Applications	National Science Foundation		Research	133,086			10079
	Subtotal: 2						881,650		59,134	
ECE S/R	Brown, Donald R		Synchronization and Pointing Techniques for Precision Electronic Warfare	BBN Technologies	DARPA	Research	496,947		32,529	10076
	Michalson, William R.	James W. Matthews	Regional Interoperability Planning	Science Applications International Corp.	Commonwealth of Massachusetts	Research	58,494			10062
	Sunar, Berk		Faster Memory Encryption and Authentication on IA	Intel		Research	46,038		9,937	10056
	Wygłinski, Alexander		OFDM Waveform Optimized for Power Limited LOS User Environments	mZeal Communications, Inc.	US Navy	Research	25,000		4,576	10072
	Subtotal: 4						626,479		47,042	
Fire Protection S/R	Dembsey, Nicholas A.		Cone Calorimeter Testing for SRnS (SOW No. G-SOW-H-00052 Rev 1)	Savannah River Nuclear Solutions, LLC	Department of Energy	Other	11,923			10061
	Notarianni, Kathy Ann		Resource Deployment Firefighter Safety	CFAI-Risk, Inc.		Research	239,812			10063
	Subtotal: 2						251,735			
ME S/R	Apelian, Diran	Daniel G Backman	Collaborative Research: Center for Resource Recovery and Recycling	National Science Foundation		Other	400,000	80,000		10074
	Brown, Christopher A.		Special Problems in Abrasive Finishing Technology	Supfina Machine Company		Research	25,000		5,208	10055
	Demetriou, Michael A.	Nikolaos A. Gatsonis	A Combined Model-Based Estimation and Adaptive Multigrid Computational Method for the Detection of a Moving Gaseous Source in an Ambient Environment using a Moving Sensor	National Science Foundation		Research	342,847		31,582	10081

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	Fofana, Mustapha S		International Research Experiences for Students: Establishing an Engineering Project Center in France	National Science Foundation		Training/Education	176,504			10070
	Furlong-Vazquez, Cosme		Development of a Noncontact 3D Shape Measurement Endoscope to Characterize Motions of Human Vocal Cords	Massachusetts Eye and Ear Infirmary		Research	118,635			10064
	Gatsonis, Nikolaos A.		A Multilevel Smooth Dissipative Particle Dynamics Computational Method for Parallel Simulation of Complex 3D Mesoscale Flows	Air Force Office of Scientific Research		Research	247,583		32,688	10069
	Hussein, Islam		Decentralized Data Gathering and Flow Control in Large-Scale Wireless Mobile Sensor Networks	Department of Energy		Research	849,526		47,686	10088
	Lados, Diana		Multi-Scale Engineering of Structural Materials for Enhanced Fatigue Performance and Reduced Weight	Department of Energy		Research	827,079		80,848	10054
	Lados, Diana		In-Situ Damage Detection and Monitoring in Structural Materials for Fatigue Critical Defense Applications	US Army		Equipment	239,000			10060
	Liang, Jianyu		Career: Advancing Nanotechnology Research and Education for Sustainable Energy Sources	Department of Energy		Research	755,522		103,648	10080
	Pryputniewicz, Ryszard J.		SMART Development Effort	Imperial Machine & Tool Co.		Other	30,000	10,289		10077
	Tryggvason, Gretar		Multiscale Simulations of Multiphase Flows	National Science Foundation		Research	342,570		29,654	10067
	Tryggvason, Gretar		Collaborative Research: Micro-Macro Modeling for Turbulent Cavitating Flows	National Science Foundation		Research	212,232			10068
	Van de Ven, James D	Michael A. Demetriou	Switch-Mode Continuously Variable Transmission	National Science Foundation		Research	402,952		56,847	10082
	Subtotal: 14						4,969,450	90,289	388,161	
	Total: 33						14,381,050	154,456	726,266	